

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

XILINX, INC.,)	
)	
Plaintiff,)	Civil Action No. _____
)	
v.)	JURY TRIAL DEMANDED
)	
LSI CORP. and)	
AGERE SYSTEMS, INC.,)	
)	
Defendants.)	

**COMPLAINT FOR DECLARATORY JUDGMENT OF PATENT NON-
INFRINGEMENT, INVALIDITY, UNENFORCEABILITY, AND FOR
UNENFORCEABILITY BY LSI AND AGERE OF THE PATENT LICENSE
AGREEMENT BETWEEN AT&T AND XILINX**

Xilinx, Inc. ("Xilinx" or "Plaintiff"), by and through its undersigned counsel, complains against LSI Corp. ("LSI") and Agere Systems Inc. ("Agere") (collectively "Defendants") as follows:

NATURE OF THE ACTION

1. This is an action for declaratory judgment of patent non-infringement, invalidity, and unenforceability arising under the patent laws of the United States, Title 35 of the United States Code, and for declaratory judgment of unenforceability by LSI and Agere of the March 1, 1992, Patent license Agreement ("PLA") between American Telephone and Telegraph Inc. ("AT&T") and Xilinx.

THE PARTIES

2. Plaintiff, Xilinx, is a Delaware corporation with its principal place of business at 2100 Logic Drive, San Jose, California 95124. Xilinx is engaged in the business of designing, developing, and marketing programmable logic solutions.

3. On information and belief, Defendant LSI is a Delaware corporation with its principal place of business at 1621 Barber Lane, Milpitas, California 95035. On information and belief, LSI is in the business of developing and marketing integrated circuits and storage systems. On information and belief, LSI is organized and existing under the laws of Delaware or is otherwise subject to the jurisdiction of this Court.

4. On information and belief, Defendant Agere is a Delaware corporation with its principal place of business at 1110 American Parkway NE, Allentown, Pennsylvania 18109. On information and belief, Agere is in the business of developing and marketing integrated circuits and storage systems. On information and belief, Agere is organized and existing under the laws of Delaware or is otherwise subject to the jurisdiction of this Court. On information and belief Agere is a wholly owned subsidiary of LSI.

JURISDICTION AND VENUE

5. This action arises under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, under the patent laws of the United States, Title 35 of the United States Code, and under California contract law. This Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, 1367, 2201, and 2202.

6. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b)-(c) and 1400(b).

THE PATENTS-IN-SUIT

7. The United States Patent and Trademark Office (the "U.S.P.T.O.") issued United States Patent No. 5,194,765 ("the '765 patent"), entitled "Digitally Controlled Element Sizing," on March 16, 1993. A copy of the '765 patent is attached hereto as Exhibit 1.

8. The U.S.P.T.O. issued United States Patent No. 5,222,030 ("the '030 patent"), entitled "Methodology for Deriving Executable Low-level Structural Descriptions and Valid Physical Implementations of Circuits and Systems from High-level Semantic Specifications and Descriptions Thereof," on June 22, 1993. A copy of the '030 patent is attached hereto as Exhibit 2.

9. The U.S.P.T.O. issued United States Patent No. 5,243,229 (“the ’229 patent”), entitled “Digitally Controlled Element Sizing,” on September 7, 1993. A copy of the ’229 patent is attached hereto as Exhibit 3.

10. The U.S.P.T.O. issued United States Patent No. 5,416,431 (“the ’431 patent”), entitled “Integrated Circuit Clock Driver Having Improved Layout,” on May 16, 1995. A copy of the ’431 patent is attached hereto as Exhibit 4.

11. The U.S.P.T.O. issued United States Patent No. 5,526,277 (“the ’277 patent”), entitled “ECAD System for Serving Executable Low-level Structural Descriptions and Valid Physical Implementations of Circuits and Systems from High-level Semantic Descriptions Thereof,” on June 11, 1996. A copy of the ’277 patent is attached hereto as Exhibit 5.

12. The U.S.P.T.O. issued United States Patent No. 5,663,900 (“the ’900 patent”), entitled “Electronic Simulation and Emulation System,” on September 2, 1997. A copy of the ’900 patent is attached hereto as Exhibit 6.

13. The U.S.P.T.O. issued United States Patent No. 5,801,958 (“the ’958 patent”), entitled “Method and System for Creating and Validating Low Level Description of Electronic Design from Higher Level, Behavior-oriented Description, Including Interactive System for Hierarchical Display of Control and Dataflow Information,” on September 1, 1998. A copy of the ’958 patent is attached hereto as Exhibit 7.

14. The U.S.P.T.O. issued United States Patent No. 6,184,700 (“the ’700 patent”), entitled “Fail Safe Buffer Capable of Operating With a Mixed Voltage Core,” on February 6, 2001. A copy of the ’700 patent is attached hereto as Exhibit 8.

15. The U.S.P.T.O. issued United States Patent No. 6,305,001 (“the ’001 patent”), entitled “Clock Distribution Network Planning and Method Therefore,” on October 16, 2001. A copy of the ’001 patent is attached hereto as Exhibit 9.

16. The U.S.P.T.O. issued United States Patent No. 6,313,683 (“the ’683 patent”), entitled “Method of Providing Clock Signals to Load Circuits in an ASIC Device,” on November 6, 2001. A copy of the ’683 patent is attached hereto as Exhibit 10.

17. The U.S.P.T.O. issued United States Patent No. 6,324,677 (“the ’677 patent”), entitled “Integrated Circuit Layout Design,” on November 27, 2001. A copy of the ’677 patent is attached hereto as Exhibit 11.

18. The U.S.P.T.O. issued United States Patent No. 6,564,361 (“the ’361 patent”), entitled “Method and Apparatus for Timing Driven Resynthesis,” on May 13, 2003. A copy of the ’361 patent is attached hereto as Exhibit 12.

19. The U.S.P.T.O. issued United States Patent No. 6,640,333 (“the ’333 patent”), entitled “Architecture for a Sea of Platforms,” on October 28, 2003. A copy of the ’333 patent is attached hereto as Exhibit 13.

20. The U.S.P.T.O. issued United States Patent No. 5,895,968 (“the ’968 patent”), entitled “Semiconductor Device Assembly with Minimized Bond Finger Connections,” on April 20, 1999. A copy of the ’968 patent is attached hereto as Exhibit 14.

21. The U.S.P.T.O. issued United States Patent No. 5,952,726 (“the ’726 patent”), entitled “Flip Chip Bump Distribution on Die,” on September 14, 1999. A copy of the ’726 patent is attached hereto as Exhibit 15.

FIRST CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the ’765 Patent)

22. The allegations contained in paragraphs 1 through 21 are incorporated by reference as if fully set herein.

23. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the ’765 patent.

24. Defendants have accused Plaintiff of infringing the ’765 patent through its manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the ’765 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

25. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '765 patent.

26. Defendants have asserted that the '765 patent is within the scope of the Patent license Agreement ("PLA") between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA.

27. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '765 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

28. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '765 patent, either literally or under the doctrine of equivalents.

29. A judicial declaration of non-infringement is necessary and appropriate in order to resolve this controversy.

SECOND CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '765 Patent)

30. The allegations contained in paragraphs 1 through 29 are incorporated by reference as if fully set herein.

31. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '765 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

32. On information and belief, the '765 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

33. A judicial declaration of invalidity is necessary and appropriate in order to resolve this controversy.

THIRD CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '765 Patent)

34. The allegations contained in paragraphs 1 through 33 are incorporated by reference as if fully set herein.

35. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '765 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

36. On information and belief, the '765 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholding of information, including prior art and information regarding the status and prosecution of co-pending applications in related patents, from the U.S.P.T.O. described below.

(a) Deliberate Withholding of Prior Art

37. On June 28, 1991, Thaddeus J. Gabara, and Scott C. Knauer (collectively the "'229 Applicants") filed U.S. Patent Application No. 724,559 ("the '559 application") with Alfred E. Hirsch, Jr., William Ryan, and Henry T. Brendzel identified as prosecuting counsel. This patent application became the '229 patent.

38. On June 28, 1991, the '299 Applicants, together with Alfred E. Dunlop (collectively the "'765 Applicants"), filed U.S. Patent Application No. 724,560 ("the '560 application"), again with Alfred E. Hirsch, Jr., William Ryan, and Henry T. Brendzel identified as prosecuting counsel. This patent application became the '765 patent.

39. The '229 and '765 patents have substantially similar specifications, sharing abstracts, background information, invention summaries, figures, and the greater part of their

preferred embodiments. The '229 and '765 patents also share similar claim language; while the '765 patent has fewer claims than the '229 patent (7 versus 46), many of these claims share limitations with the 229 patent.

40. The '229 Applicants are common to both patents.

41. On June 18, 1992, the '229 Applicants filed European Patent Application No. 92305585.9, published as EP0520687 A1 ("the '687 EP Application"), which is substantially similar to the '229 patent and to the '559 application.

42. On July 31, 1992, the European Patent Office completed a search report in association with the '687 EP Application ("the '687 Search Report"). The '687 Search Report (attached as Exhibit 16) enumerated 13 items of prior art, of which 12 were designated with an "X" signifying these items of art were "particularly relevant if taken alone." Further, these 12 were not designated with a "D," meaning that they were not cited in the '687 EP Application by the '229 Applicants (who constitute two of the three '765 Applicants). The 12 items of prior art designated as "particularly relevant if taken alone" are:

- i) DE-A-3 627 681 (HITACHI LTD). This item was identified as "particularly relevant if taken alone" with respect to claims 1-4, 8, and 9 of the '687 EP Application. These claims correspond to claims 1-3, 18, 31, and 36 of the '229 patent. Also, claim 1 of the '765 patent shares a limitation with claim 1 of the '229 patent and claim 7 of the '765 patent shares a limitation with '229 patent claim 31.
- ii) Emsworth, Programmable Impedance Off-Chip Driver, Research Disclosure no. 313, May 1990, page 370, GB. This item was identified as "particularly relevant if taken alone" with respect to claims 1 and 3 of the '687 EP Application. These claims correspond to claims 1 and 3 of the '229 patent. Also, claim 1 of the '765 patent shares a limitation with claim 1 of the '229 patent.
- iii) Patent Abstracts of Japan vol. 10, no. 297 (E-444)(2353), 9 October 1986; & JP – A – 61112424 (NEC CORP) 30.05.1986. This item was identified as "particularly relevant if taken alone" with respect to claims 1, 3, and 4 of the '687 EP Application. These claims correspond to claims 1, 3, and 18 of the '229 patent. Also, claim 1 of the '765 patent shares a limitation with claim 1 of the '229 patent.

- iv) Patent Abstracts of Japan vol. 9, no. 10 (E-290)(1733), 17 January 1985; & JP – A– 59158623 (MATSUSHITA DENKO K.K.) 08.09.1984. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.
- v) Patent Abstracts of Japan vol. 15, no. 315 (E-1099), 12 August 1991; & JP – A – 3117020 (NEC CORP) 17.05.1991. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.
- vi) Patent Abstracts of Japan vol. 14, no. 257 (E-936)(4200), 4 June 1990; & JP – A – 278319 (HITACHI LTD) 19.03.1990. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent claim 1.
- vii) Patent Abstracts of Japan vol. 14, no. 229 (E-928)(4172), 15 May 1990; & JP – A 258925 (NEC IC MICROCOMPUT SYST LTD) 28.02.1990. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.
- viii) EP-A-0 315 473 (TEXAS INSTRUMENTS INCORPORATED). This item was identified as “particularly relevant if taken alone” with respect to claims 1-4, 8, and 9 of the ’687 EP Application. These claims correspond to claims 1-3, 18, 31, and 36 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent and claim 7 of the ’765 patent shares a limitation with claim 31 of the ’229 patent.
- ix) EP-A-0 264 470 (INTERNATIONAL BUSINESS MACHINES CORPORATION). This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.
- x) US-A-4 707 620 (S.K. SULLIVAN et al.). This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.
- xi) Branson, C., A High Performance, 10-Volt Integrated PIN Electronics Driver, International Test Conference 1989, August 29-31, 1989, pages 846-853,

Sheraton Washington Hotel, Washington, US. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent. Also, claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent.

- xii) Auto Programming Lumped Load Off-Chip Drivers, IBM Technical Disclosure Bulletin, December 1987, pages 23-25, vol. 30, no. 7, Armonk, NY, US. This item was identified as “particularly relevant if taken alone” with respect to claims 1-5, 8, and 9 of the ’687 EP Application. These claims correspond to claims 1-3, 18, 19, 31, and 36 of the ’229 patent. Claim 1 of the ’765 patent shares a limitation with claim 1 of the ’229 patent and claim 7 of the ’765 patent shares a limitation with claim 31 of the ’229 patent.

43. On information and belief, the ’687 Search Report disclosed information that is material to the patentability of the claims of the ’765 patent. However, neither the ’687 Search Report nor the 12 items of prior art described above were disclosed to the U.S.P.T.O. during the prosecution that resulted in the ’765 patent. The ’765 patent was not granted until March 16, 1993, more than seven months after the ’687 Search Report was issued on July 31, 1992. Thus, before the issuance of the ’765 patent, the ’765 Applicants and others with a duty to disclose information material to the patentability of the ’765 patent were in possession of highly material art and did not disclose this art to the U.S.P.T.O.

44. On information and belief, at a minimum, the two ’765 Applicants who were also named as inventors in connection with the ’687 Search Report, and their prosecuting counsel, had a duty to disclose at least the art identified above in connection with the prosecution of the application of the ’765 patent. Because the undisclosed items were relevant to the patentability of the ’765 patent, failure to disclose this information was a material breach of the duty owed to the U.S.P.T.O.

(b) Deliberate Withholding of Material Information Regarding The Status and Prosecution of Co-Pending Applications

45. Further, on information and belief, during the pendency of the ’765 patent, the ’765 Applicants and others with a duty to disclose information material to the patentability of the ’765 patent failed to disclose material information regarding the status and prosecution of co-

pending applications in the related patent identified above. These omissions included, but are not limited to, the non-disclosure of the '687 Search Report and associated art not necessarily prior art, from this co-pending application that a reasonable examiner would consider to be material to the patentability of the '765 patent.

46. Thus, on information and belief, the '765 Applicants and others with a duty to disclose information material to the patentability of the '765 patent intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the U.S.P.T.O. to improperly issue the '765 patent. Such conduct was inequitable, rendering each and every claim of the '765 patent unenforceable.

47. A judicial declaration of unenforceability of the '765 patent is necessary and appropriate in order to resolve this controversy.

FOURTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '030 Patent)

48. The allegations contained in paragraphs 1 through 47 are incorporated by reference as if fully set herein.

49. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '030 patent.

50. Defendants have accused Plaintiff of infringing the '030 patent through its manufacture, sale, use, and/or importation of certain software products, and have asserted that Plaintiff must take a license to the '030 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products.

51. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products without a license to the '030 patent.

52. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-

infringement of the '030 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendant within the meaning of 28 U.S.C. § 2201.

53. Upon information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '030 patent, either literally or under the doctrine of equivalents.

54. A judicial declaration of non-infringement of the '030 patent is necessary and appropriate in order to resolve this controversy.

FIFTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '030 Patent)

55. The allegations contained in paragraphs 1 through 54 are incorporated by reference as if fully set herein.

56. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '030 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

57. Upon information and belief, the '030 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

58. A judicial declaration of invalidity of the '030 patent is necessary and appropriate in order to resolve this controversy.

SIXTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '229 Patent)

59. The allegations contained in paragraphs 1 through 58 are incorporated by reference as if fully set herein.

60. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '229 patent.

61. Defendants have accused Plaintiff of infringing the '229 patent through its

manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the '229 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

62. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '229 patent.

63. Defendants have asserted that the '229 patent is within the scope of the PLA between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA.

64. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '229 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

65. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '229 patent, either literally or under the doctrine of equivalents.

66. A judicial declaration of non-infringement of the '229 patent is necessary and appropriate in order to resolve this controversy.

SEVENTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '229 Patent)

67. The allegations contained in paragraphs 1 through 66 are incorporated by reference as if fully set herein.

68. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '229 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

69. On information and belief, the '229 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

70. A judicial declaration of invalidity of the '229 patent is necessary and appropriate in order to resolve this controversy.

EIGHTH CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '229 Patent)

71. The allegations contained in paragraphs 1 through 70 are incorporated by reference as if fully set herein.

72. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '229 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

73. On information and belief, the '229 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholding of information, including prior art and information regarding the status and prosecution of co-pending applications in related patents, from the U.S.P.T.O. described below.

(a) Deliberate Withholding of Prior Art

74. The allegations contained in paragraphs 34 through 47 are incorporated by reference as if fully set herein.

75. On information and belief, the '229 patent, the '765 patent, and U.S. Patent No. 5,298,800 ("the '800 patent") have substantially similar specifications, sharing abstracts, background information, invention summaries, figures, and the greater part of their preferred embodiments. Two named inventors, Thaddeus J. Gabara and Scott C. Knauer (collectively "the '229 Applicants"), are common to all three patents.

76. On or about June 28, 1991, the '229 Applicants filed U.S. Patent Application No. 724,559 ("the '599 application") with Alfred E. Hirsch, Jr., William Ryan, and Henry T. Brendzel identified as prosecuting counsel. This patent application became the '229 patent.

77. On or about June 28, 1991, the '229 Applicants, together with Alfred E. Dunlop, (collectively "the '765 Applicants"), filed U.S. Patent Application No. 724,560 ("the '560 application"), also with Alfred E. Hirsch, Jr., William Ryan, and Henry T. Brendzel identified as prosecuting counsel. This patent application would ultimately issue as the '765 patent.

78. On November 2, 1992, the '765 Applicants filed U.S. Patent Application No. 970,415 ("the '415 application") as a divisional application of the '560 application, with Alfred E. Hirsch, Jr., William Ryan, and Henry T. Brendzel still identified as prosecuting counsel. This '415 application became the '800 patent.

79. On March 24, 1993, the '415 application was rejected. Claim 9 of this divisional application was specifically rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,134,311 ("the '311 patent").

80. In a communication received by the U.S.P.T.O. on or about May 6, 1993, the '765 Applicants (including the '229 Applicants) amended their claims in the '415 application, and in doing so explicitly referenced and acknowledged the existence of the '311 patent.

81. On information and belief, the cited '311 patent publication disclosed information that is material to the patentability of the '229 patent. The '311 patent, alone, and in combination with the additional references discussed in this section, describes all the limitations in many of the '229 patent claims, including independent claims 1, 3, 31, and dependent claim 42. As such, the '311 patent is material to the patentability of the '229 patent.

82. Further, in this March 24, 1993 rejection of the '415 application, three additional patents material to the patentability of the '229 patent were disclosed:

U.S. Patent No. 4,855,623	Output buffer having programmable drive current
U.S. Patent No. 5,095,231	Automatic system for adjusting the output impedance of fast CMOS drivers

U.S. Patent No. 5,170,073

Ultra-low noise port output driver circuit

83. On information and belief, the cited '623, '231, and '073 patent publications disclose information that is material to the patentability of the '229 patent. All three patents, alone, and in combination with the additional references discussed in this section, describe all the limitations in claim 1 of the '229 patent. Patents '623 and '073, alone and in combination with the additional prior art references discussed in this section, describe all the limitations in claim 3 of the '229 patent. As such, these three patents are highly material to and not cumulative to the patentability of the '229 patent.

84. The '229 patent was granted on September 7, 1993, more than five months after the office action rejecting claim 9 based on the '311 patent, and referencing the three patents above. The '229 Applicants and others with a duty to disclose information material to the patentability of the '229 patent were in possession of highly material art before the '229 patent issued.

85. Additionally, in an office action related to the '765 patent mailed June 19, 1992, five U.S. Patents were disclosed to the '765 Applicants and their prosecuting counsel. These five patents were disclosed again when the '765 patent was granted on March 16, 1993:

U.S. Patent No. 4,584,492

Temperature and process stable MOS input buffer

U.S. Patent No. 4,691,127

Adaptive electronic buffer system having consistent operating characteristics

U.S. Patent No. 4,825,101

Full-level, fast CMOS output buffer

U.S. Patent No. 4,855,623

Output buffer having programmable drive current

U.S. Patent No. 5,095,231

Automatic system for adjusting the output impedance of fast CMOS drivers

Even though the '765 patent was granted more than five months before the '229 patent was granted, none of these patents disclosed in the '765 patent were disclosed by the '229 Applicants or their counsel during the prosecution of the '229 patent.

86. On information and belief, the final four of these five patents are particularly

relevant to the subject matter of the '229 patent. The final two of these patents, the '623 and the '231, were discussed *supra* in ¶¶81-82. The '101 patent, alone, and in combination with the additional references discussed in this section, describe all the limitations in claims 1 and 3 of the '229 patent. The '127 patent, alone, and in combination with the additional references discussed in this section, describe all the limitations in claims 1, 31, and 42 of the '229 patent. As such, these four patents are material to the patentability of the '229 patent.

87. Thus, before the close of prosecution leading to the grant of the '765 patent, and well before the issuance of the '229 patent, the '229 Applicants and their prosecuting counsel, each with a duty to disclose information material to the patentability of the '229 patent, did not disclose material art in their possession.

88. Additionally, on June 18, 1992, the '229 Applicants filed European Patent Application No. 92305585.9, published as EP0520687 A1 ("the '687 EP Application"), which is substantially similar to the '229 patent and the '559 application.

89. On July 31, 1992, the European Patent Office completed a search report in association with the '687 EP Application ("the '687 Search Report"). The '687 Search Report (attached as Exhibit 16) enumerated 13 items of prior art, of which 12 were designated with an "X" signifying these items of art were "particularly relevant if taken alone." Further, these 12 were not designated with a "D," meaning that they were not cited in the '687 EP Application by the '229 Applicants (who include two of the three '765 Applicants). The 12 items of prior art designated as particularly relevant if taken alone are:

- i) DE-A-3 627 681 (HITACHI LTD). This item was identified as "particularly relevant if taken alone" with respect to claims 1-4, 8, and 9 of the '687 EP Application. These claims correspond to claims 1-3, 18, 31, and 36 of the '229 patent.
- ii) Emsworth, Programmable Impedance Off-Chip Driver, Research Disclosure no. 313, May 1990, page 370, GB. This item was identified as "particularly relevant if taken alone" with respect to claims 1 and 3 of the '687 EP Application. These claims correspond to claims 1 and 3 of the '229 patent.

- iii) Patent Abstracts of Japan vol. 10, no. 297 (E-444)(2353), 9 October 1986; & JP – A – 61112424 (NEC CORP) 30.05.1986. This item was identified as “particularly relevant if taken alone” with respect to claims 1, 3, and 4 of the ’687 EP Application. These claims correspond to claims 1, 3, and 18 of the ’229 patent.
- iv) Patent Abstracts of Japan vol. 9, no. 10 (E-290)(1733), 17 January 1985; & JP – A – 59158623 (MATSUSHITA DENKO K.K.) 08.09.1984. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- v) Patent Abstracts of Japan vol. 15, no. 315 (E-1099), 12 August 1991; & JP – A – 3117020 (NEC CORP) 17.05.1991. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- vi) Patent Abstracts of Japan vol. 14, no. 257 (E-936)(4200), 4 June 1990; & JP – A – 278319 (HITACHI LTD) 19.03.1990. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- vii) Patent Abstracts of Japan vol. 14, no. 229 (E-928)(4172), 15 May 1990; & JP – A – 258925 (NEC IC MICROCOMPUT SYST LTD) 28.02.1990. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- viii) EP-A-0 315 473 (TEXAS INSTRUMENTS INCORPORATED). This item was identified as “particularly relevant if taken alone” with respect to claims 1-4, 8, and 9 of the ’687 EP Application. These claims correspond to ’229 patent claims 1-3, 18, 31, and 36.
- ix) EP-A-0 264 470 (INTERNATIONAL BUSINESS MACHINES CORPORATION). This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- x) US-A-4 707 620 (S.K. SULLIVAN et al.). This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.
- xi) Branson, C., A High Performance, 10-Volt Integrated PIN Electronics Driver, International Test Conference 1989, August 29-31, 1989, pages 846-853, Sheraton Washington Hotel, Washington, US. This item was identified as

“particularly relevant if taken alone” with respect to claims 1 and 3 of the ’687 EP Application. These claims correspond to claims 1 and 3 of the ’229 patent.

- xii) Auto Programming Lumped Load Off-Chip Drivers, IBM Technical Disclosure Bulletin, December 1987, pages 23-25, vol. 30, no. 7, Armonk, NY, US. This item was identified as “particularly relevant if taken alone” with respect to claims 1-5, 8, and 9 of the ’687 EP Application. These claims correspond to claims 1-3, 18, 19, 31, and 36 of the ’229 patent.

90. On information and belief, the ’687 Search Report disclosed information that is material to the patentability of the claims of the ’229 patent. As an example, references (i) and (iii) alone, and in combination with the additional references discussed in this section, describe all the limitations in claims 1 and 3 of the ’229 patent. As such, these two patents are highly material to and not cumulative to the patentability of the ’229 patent.

91. Also, 37 C.F.R. §1.97(e) requires the applicant to indicate in an Information Disclosure Statement whether or not prior art was first cited by a foreign patent office, clearly putting applicants and their agents on notice that material foreign prior art must be disclosed. However, neither the ’687 Search Report nor the 12 items of prior art described above were disclosed to the U.S.P.T.O. prior to the issuance of the ’229 patent.

92. The ’229 patent was not granted until September 7, 1993, more than a year after the ’687 Search Report issued on July 31, 1992. Thus, before the issuance of the ’229 patent, the ’229 Applicants and others with a duty to disclose information material to the patentability of the ’229 patent were in possession of highly material art and did not disclose this art to the U.S.P.T.O.

93. Additionally, on June 18, 1992, the ’765 Applicants (including the ’229 Applicants) filed European Patent Application No. 92305583.4, published as EP0520685 A1 (“the ’685 EP Application”), which is substantially similar to the ’765 patent and the ’560 application.

94. On October 6, 1992, the European Patent Office issued a search report in association with the ’685 EP Application (“the ’685 Search Report”). The ’685 Search Report (attached as Exhibit 18) enumerated two items of prior art, of which one was designated with an

“X” signifying this item of art was “particularly relevant if taken alone.” Further, this item was not designated with a “D,” meaning it was not cited in the ’685 EP Application by the ’765 Applicants. This is the item of prior art:

- i) Patent Abstracts of Japan vol. 008, no. 153 (P-287), 17 July 1984; & JP – A – 59 051 303 (NIPPON DENSO) 24 March 1984. This item was identified as “particularly relevant if taken alone” with respect to claims 1 and 2 of the ’685 EP Application. Claim 2 of the ’684 EP Application corresponds to claim 1 of the ’765 patent. Also, claim 1 of the ’765 patent shares claim limitations with claims 20, 24, and 42 of the ’229 patent.

95. On information and belief, the ’685 Search Report disclosed information that is material to the patentability of the claims of the ’229 patent. Further, this information regarding the use of a bridge circuit and a comparator to generate signals that change the impedance of variable resistance modules, is not cumulative to any of the prior art disclosed in the prosecution of the ’229 patent. However, neither the ’685 Search Report nor the item of prior art described above were disclosed to the U.S.P.T.O. during the prosecution that resulted in the ’229 patent. The ’229 patent was not granted until September 7, 1993, more than eleven months after the ’685 Search Report was issued on October 6, 1992. Thus, before the issuance of the ’229 patent, the ’229 Applicants and others with a duty to disclose information material to the patentability of the ’229 patent were in possession of highly material art and did not disclose this art to the U.S.P.T.O.

96. On information and belief, the ’229 Applicants had a duty to disclose at least the art identified above. The failure to identify prior art disclosed to the ’229 Applicants and their prosecuting counsel at multiple times from many different sources indicates a pattern of inequitable conduct. Because the undisclosed items were so highly relevant, to withhold this information was a material breach of the duty owed to the U.S.P.T.O.

(b) Deliberate Withholding of Material Information Regarding The Status and Prosecution of Co-Pending Applications

97. Further, on information and belief, during the pendency of the ’229 patent, the

'229 Applicants and others with a duty to disclose information material to the patentability of the '229 patent failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '229 patent.

98. Thus, on information and belief, the '229 Applicants and others with a duty to disclose information material to the patentability of the '229 patent intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the U.S.P.T.O. to improperly issue the '229 patent. Such conduct was inequitable, rendering each and every claim of the '229 patent unenforceable.

99. A judicial declaration of unenforceability of the '229 patent is necessary and appropriate in order to resolve this controversy.

NINTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '431 Patent)

100. The allegations contained in paragraphs 1 through 99 are incorporated by reference as if fully set herein.

101. Defendants claim to be the owner and assignee of all rights, title, and interest in and under the '431 patent.

102. Defendants have accused Plaintiff of infringing the '431 patent through its manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the '431 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

103. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '431 patent.

104. Defendants have asserted that the '431 patent is within the scope of the PLA between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA.

105. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '431 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

106. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '431 patent, either literally or under the doctrine of equivalents.

107. A judicial declaration of non-infringement of the '431 patent is necessary and appropriate in order to resolve this controversy.

TENTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '431 Patent)

108. The allegations contained in paragraphs 1 through 107 are incorporated by reference as if fully set herein.

109. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '431 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

110. On information and belief, the '431 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

111. A judicial declaration of invalidity of the '431 patent is necessary and appropriate in order to resolve this controversy.

ELEVENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '900 Patent)

112. The allegations contained in paragraphs 1 through 111 are incorporated by reference as if fully set herein.

113. Defendants claim to be the owner and assignee of all rights, title, and interest in and under the '900 patent.

114. Defendants have accused Plaintiff of infringing the '900 patent through its manufacture, sale, use, and/or importation of certain software products and/or support tools, and have asserted that Plaintiff must take a license to the '900 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products and/or support tools.

115. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products and/or support tools without a license to the '900 patent.

116. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '900 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

117. Upon information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '900 patent, either literally or under the doctrine of equivalents.

118. A judicial declaration of non-infringement of the '900 patent is necessary and appropriate in order to resolve this controversy.

TWELFTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '900 Patent)

119. The allegations contained in paragraphs 1 through 118 are incorporated by reference as if fully set herein.

120. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '900 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

121. Upon information and belief, the '900 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

122. A judicial declaration of invalidity of the '900 patent is necessary and appropriate in order to resolve this controversy.

THIRTEENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '958 Patent)

123. The allegations contained in paragraphs 1 through 122 are incorporated by reference as if fully set herein.

124. Defendants claim to be the owner and assignee of all rights, title, and interest in and under the '958 patent.

125. Defendants have accused Plaintiff of infringing the '958 patent through its manufacture, sale, use, and/or importation of certain software products, and have asserted that Plaintiff must take a license to the '958 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products.

126. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products without a license to the '958 patent.

127. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '958 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

128. Upon information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '958 patent, either literally or under the doctrine of equivalents.

129. A judicial declaration of non-infringement of the '958 patent is necessary and appropriate in order to resolve this controversy.

FOURTEENTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '958 Patent)

130. The allegations contained in paragraphs 1 through 129 are incorporated by reference as if fully set herein.

131. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '958 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

132. Upon information and belief, the '958 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

133. A judicial declaration of invalidity of the '958 patent is necessary and appropriate in order to resolve this controversy.

FIFTEENTH CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '958 Patent)

134. The allegations contained in paragraphs 1 through 133 are incorporated by reference as if fully set herein.

135. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '958 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

136. On information and belief, the '958 patent is unenforceable by reason of

inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholdings of information from the U.S.P.T.O. described below.

137. Carlos Dangelo, listed as a named inventor of U.S. Patent 5,222,030, is also a named inventor of the '958 patent.

138. During the prosecution of U.S. Patent Application 07/507,201 ("the '201 application"), which issued as the '030 patent, a co-pending European Patent Application was filed with the European Patent Office on April 5, 1991, and was issued application number EP 91 10 5400 and was later published as 0 463 301 A2. This application was substantially similar to the '201 application.

139. On information and belief, U.S. Patent Application 07/507,201 issued as U.S. Patent 5,222,030 on June 22, 1993. Subsequent to the issuance of the '030 patent, the European Patent Office prepared a search report for application EP 91 10 5400, which was completed on April 26, 1994, and assigned publication number 0 463 301 A3. In accordance with European Patent Office procedure, a copy of this report was delivered to the representatives of the named inventors of the '030 patent and received during the pendency of the prosecution of the '958 patent. The search report listed three references:

- i) Lagnese et al., Architectural Planning for System Level Design ("the Lagnese reference").
- ii) Lis et al., VHDL Synthesis Using Structured Modeling ("the Lis reference").
- iii) McFarland et al., The High-Level Synthesis of Digital Systems ("the McFarland reference").

140. Prior to the issuance of the European search report on EP 91 10 5400 on April 26, 1994, at least eight U.S. Patent Applications were filed that were either continuations or

continuations-in-part from the original '201 application. These applications and their issued patents are:

- i) 08/054,053 (abandoned).
- ii) 08/077,294 (U.S. Patent 5,544,067.)
- iii) 08/076,728 (U.S. Patent 5,541,849.)
- iv) 08/076,729 (U.S. Patent 5,544,066.)
- v) 08/077,304 (U.S. Patent 5,623,418.)
- vi) 08/077,403 (U.S. Patent 5,553,002.)
- vii) 08/076,738 (U.S. Patent 5,557,531.)
- viii) 08/196,337 (U.S. Patent 5,555,201, or "the '201 patent").

Subsequent to the issuance of the search report on EP 91 10 5400, at least two more U.S. Patent Applications were filed in the same patent family. U.S. Application 08/355,105 was filed on December 13, 1994, which was a continuation from 08/054,053, and eventually issued as U.S. Patent 5,526,277. U.S. Application 08/707,918 was filed on September 10, 1996 as a continuation from 08/196,337 and a continuation-in-part from applications 08/076,728; 08/076,729; 08/077,304; 08/077,403; and 08/076,738, and eventually issued as the '958 patent.

141. On information and belief, the Lagnese reference was disclosed to the U.S.P.T.O. on each of the co-pending or later-filed patent applications. The Lis and McFarland references, however, were not disclosed on any of the co-pending or later-filed patent applications described in the preceding paragraphs; most specifically, the application that eventually issued as the '958 patent.

142. On information and belief, the Lis and McFarland references were disclosed on at least one other U.S. Patent Application, 08/742,359, which was also a member of the '030 patent family. Application 08/742,359 was filed on November 1, 1996 and issued as U.S. Patent 5,870,308 ("the '308 patent"). However, the Lagnese reference was not disclosed during the prosecution of the '308 patent.

143. On information and belief, the Lis and McFarland references are material to the prosecution of the '958 patent, as well as other patents in the patent family, and are not cumulative. Both references are relevant to the patentability of the claimed '958 invention under 35 U.S.C. §§ 102, 103 as relevant prior art. The McFarland reference is especially material in that it describes the use of "control and data flow" information as part of the ECAD methodology that is recited as a limitation in claims 1-22 and 32-40 of the '958 patent.

144. The immediate parent application to the '958 patent, via continuation, was issued as the '201 patent. The '958 patent and the '201 patent contain the same specification and named inventors. During prosecution of the '201 patent, the '958 applicants disclosed references to the U.S.P.T.O. that they did not disclose to the U.S.P.T.O. during the prosecution of the '958 patent. These references include the following:

- i) Thacker et al., Chip Simulation Is All A Matter of Image, ESD: The Electronic System Design Magazine, November 1988, pp. 65-70.
- ii) Beaverton, Here's Software To Speed Vector Creation, Electronics, May 1989, pp. 48-52.
- iii) Handley, The CAR System: Multimedia In Support Of Collaborative Design, IEEE Colloquium on 'Multimedia and Professional Applications', Digest No. 026, January 5, 1993, p. 8.
- iv) Pendergast et al., Coordination And Control For Collaborative Workstation Design, 1991, Cambridge Univ. Pres., vii + 456 pages.
- v) Muller, PICTIVE-An Exploration In Participatory Design, Conference Proceedings, CHI 91, 1991, pp. 255-231.
- vi) Dubois, Prototyping Approach Of Multi-Actors Computer Aided Design For Buildings In The Frame Of The CIBAO Project, EuropIA, 1990, pp. 338-350.

Upon information and belief, if these six references were considered by the '958 applicants to be material and not cumulative for the '201 patent then they are material and not cumulative for the '958 patent.

145. The '030 patent family has a long prosecution history that includes numerous double patenting rejections. These double patenting rejections were cured by terminal disclaimers in the '201 parent patent to the '958 patent, as well as at least six of the grandparent and great-grandparent patents to the '958 patent. Although the '958 patent is not subject to a terminal disclaimer, on information and belief, it should have received a double patenting rejection during prosecution for at least the similarities between claim 17 of the '201 patent and claim 32 of the '958 patent. Claim 17 of the '201 patent recites:

A method of creating an electronic design on an ECAD system having a computer, a database accessible to the computer, design tools running on the computer, and a display device and one or more input devices enabling a user to interact with the computer, comprising:

- displaying, on a display device of a computer, the display device having a display screen, a control and dataflow graph representation of an electronic design, the control and dataflow graph being at a given hierarchical level of abstraction, the control and dataflow graph containing at least one object;
- storing in the database information relating to the electronic design at various levels of abstraction;
- retrieving information relating to the electronic design from a database accessible to the computer;
- displaying the information contemporaneously with displaying the control and dataflow graph; and
- providing selectable lower level representations of objects represented in the control and dataflow graph.

And claim 32 of the '958 patent recites:

A method of creating an electronic design on a system having an accessible database, design tools, and a display device and one or more input devices enabling a user to interact with the system, comprising:

- displaying a control and dataflow graph representation of an electronic design, the control and dataflow graph being at a given hierarchical level of abstraction;
- storing in the accessible database information relating to the electronic design at various levels of abstraction;
- retrieving information relating to the electronic design from the accessible database;
- displaying the information contemporaneously with displaying the control and dataflow graph; and
- providing selectable representations of objects represented in the control and dataflow graph.

146. On information and belief, given the similarities in the claimed subject matter among the '958 patent, its parent the '201 patent, and other patents in the '030 family, any references and other materials that would be deemed material and not cumulative in the prosecution of the '201 patent and other patents in the '030 family would be considered highly relevant, material and not cumulative by an examiner in the prosecution of the '958 patent.

147. In addition to descending from the '030 patent, the '958 patent also descended from U.S. Patent Application 07/512,129. The 07/512,129 application was eventually abandoned, but a subsequent continuation, application 07/917,801 eventually issued as U.S. Patent 5,220,512 ("the '512 patent"). The '958 and '512 patents share Daniel Watkins as a named inventor. During the prosecution of the '512 patent, the applicants, Watkins et al., disclosed 16 references to the U.S.P.T.O. that were not disclosed during the prosecution of the '958 patent, including:

U.S. Patent Nos. 4,527,249; 4,653,090; 4,694,411; 4,775,950; 4,791,593; 4,815,016; 4,839,821; 4,852,015; 4,855,726; 4,855,929; 4,858,143; 4,868,770; and 4,873,647.

D.K. Lynn, Computer Aided Design for LSI circuits, Computer (May/Jun. 1972), pp. 36-45.

Tektronix, Tek Products 1988: Design Automation Products, 1987, pp. 83-90.

DAS, An Automated System to Support Design Analysis, IEEE Conf. Circuits, Systems & Computers, 1978, pp. 646-650.

148. On information and belief, between the time the application for the '030 patent was filed and the '958 patent issued, Carlos Dangelo, the only common named inventor among the '030, '277, and '958 patents, and the other named co-inventors had approximately 41 other applications co-pending that resulted in issued patents. Of those 41 patents, approximately 19 were from the '030 patent family or related to similar claimed inventions and include the following:

U.S. Patent No. 6,470,482 Method and system for creating, deriving and validating structural description of electronic system from higher

	level, behavior-oriented description including interactive schematic design and simulation
U.S. Patent No. 6,324,678	Method and system for creating and validating low level description of electronic design
U.S. Patent No. 6,216,252	Method and system for creating, validating, and scaling structural description of electronic device
U.S. Patent No. 5,933,356	Method and system for creating and verifying structural logic model of electronic design from behavioral description, including generation of logic and timing models
U.S. Patent No. 5,910,897	Specification and design of complex digital systems
U.S. Patent No. 5,907,494	Computer system and method for performing design automation in a distributed computing environment
U.S. Patent No. 5,880,971	Methodology for deriving executable low-level structural descriptions and valid physical implementations of circuits and systems from semantic specifications and descriptions thereof
U.S. Patent No. 5,870,308	Method and system for creating and validating low-level description of electronic design
U.S. Patent No. 5,867,399	System and method for creating and validating structural description of electronic system from higher-level and behavior-oriented description
U.S. Patent No. 5,598,344	Method and system for creating, validating, and scaling structural description of electronic device
U.S. Patent No. 5,572,437	Method and system for creating and verifying structural logic model of electronic design from behavioral description, including generation of logic and timing models
U.S. Patent No. 5,572,436	Method and system for creating and validating low level description of electronic design
U.S. Patent No. 5,557,531	Method and system for creating and validating low level structural description of electronic design from higher level, behavior-oriented description, including estimating power dissipation of physical implementation

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|---------------------------|--|
| U.S. Patent No. 5,555,201 | Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, including interactive system for hierarchical display of control and dataflow information |
| U.S. Patent No. 5,553,002 | Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, using milestone matrix incorporated into user-interface |
| U.S. Patent No. 5,544,067 | Method and system for creating, deriving and validating structural description of electronic system from higher level, behavior-oriented description, including interactive schematic design and simulation |
| U.S. Patent No. 5,544,066 | Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, including estimation and comparison of low-level design constraints |
| U.S. Patent No. 5,541,849 | Method and system for creating and validating low level description of electronic design from higher level, behavior-oriented description, including estimation and comparison of timing parameters |
| U.S. Patent No. 5,493,508 | Specification and design of complex digital systems |

The references disclosed from these 19 patents include approximately 47 references that were not disclosed during the prosecution of the '958 patent. These references include:

U.S. Patent Nos. 5,267,176; 5,349,536; 5,359,538; 5,398,195; and 5,485,396.

JM. Kleinhans et al., Gordian: VLSI Placement by Quadratic Programming and Slicing Optimization; March 1991, pp. 356-365, vol. 10, No. 3, IEEE.

W. Sun et al., A Loosely Coupled Parallel Algorithm for Standard Cell Placement, 1994, pp. 137-144, ACM. .

H. Onodera et al., A Block Placement Procedure Using a Force Model, 1989, pp. 87-96, Scripta Technica, Inc.

K. Ueda et al., Champ: Chip Floor Plan for Hierarchical VLSI Layout Design, Jan. 1985 IEEE, vol. CAD-4, No. 1.

N.R. Quinn, Jr., et al., A Force Directed Component Placement Procedure for Printed Circuit Boards, 1979, pp. 377-388, IEEE.

C. Sechen et al., An Improved Simulated Annealing Algorithm for Row-Based Placement, 1987, pp. 478-481, IEEE.

C.M. Fiduccia et al., A Linear-Time Heuristic for Improving Network Partitions, 1982, pp. 175-181, IEEE.

Tango-Schematic Capture Software, PERX Catalog, pp. 18 & 19, No date.

Ogawa et al., Timing-driven placement for general cell layout, IEEE Int. Symp. Circuits and Systems, May, 1990, pp. 872-876.

Ku et al., High-level synthesis and optimization strategies in Hercules and Hebe, IEEE, Euro ASIC '90, June 1990, pp. 124-129.

D Gregory et al., SOCRATES: A System for Automatically Synthesizing and Optimizing Combinational Logic, IEEE 23rd Design Automation Conference, 1986, pp. 79-85.

Mark Kahrs, Matching a Parts Library in a Silicon Compiler, 1986, pp. 169-172, IEEE.

Rosebrugh et al., Circuit Synthesis for the SILC Silicon Compiler, IEEE Custom Integrated Circuits Conference, 1985, pp. 384-388.

Edited by G. De Micheli et al., Design Systems for VLSI Circuits--Logic Synthesis and Silicon Compilation, Nijhof, pp. 130-193.

Matsumoto et al., Hierarchical Logic Synthesis System for VLSI, IEEE Proceedings of ISCAS, 1985, pp. 651-654.

L. Trevillyan, An Overview of Logic Synthesis Systems, 24th ACM/IEEE Automation Conference, 1987, pp. 166-172.

Darringer et al., A New Look at Logic Synthesis, IEEE 17th Design Automation Conference, 1980, pp. 543-549.

Hutchings et al., Integrated VLSI CAD Systems at Digital Equipment Corporation, IEEE 22.sup.nd Design Automation Conference, 1985, pp. 543-548.

Waxman et al., VHDL Links Design Test, and Maintenance, IEEE Spectrum, May 1989, pp. 40-44, vol. 26, No. 5.

Brewer et al., Knowledge Based Control In Micro-architecture Design, Proc. of the 24th Design Automation Conf., ACM/IEEE, June 1987, pp. 203-209, New York, NY.

DeGroat et al., The AFIT VHDL Environment, IEEE, 1988 Frontiers in Education Conference, October 22, 1988, pp. 324-329.

Chawla et al., An Investigation of the Performance of a Distributed Functional Digital Simulator, IEEE, Proceedings of the 32nd Midwest Symposium on Circuits and Systems, August 14, 1989, pp. 470-473, vol. 1.

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149. Gerald E. Linden was the patent agent of record for the '030 patent family until June, 1994, when the power of attorney was transferred to the firm of Poms, Smith, Lande & Rose. Gerald E. Linden was the agent of record when the European search report on the EP 91 10 5400 application was issued on 4/26/1994.

150. On information and belief, during prosecution of the '958 patent, as well as the other applications in the same patent family, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, were under a

duty to disclose to the U.S.P.T.O. the Lis and McFarland references, once they were brought to the '958 Applicants' attention by the European search report.

151. On information and belief, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, knew, or should have known, that the Lis and McFarland references were material to the patentability of the '953 patent as well as the other applications in the same patent family. The '958 Applicants demonstrated this duty during its prosecution of the '308 patent.

152. On information and belief, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, failed to disclose the Lis and McFarland references during the prosecution of the '953 patent's application as well as the other applications in the same patent family.

153. On information and belief, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, failed to disclose other material and not cumulative references during the prosecution of the '958 patent as described in the preceding paragraphs.

154. On information and belief, during the pendency of the '958 patent, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, had a duty to disclose information material to the patentability of the '958 patent and failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '958 patent.

155. On information and belief, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, had a duty to disclose information material to the patentability of the '958 patent and failed to disclose the Lis,

McFarland, and other references identified above during the prosecution of the '953 patent, as well as the other applications in the same patent family, with the intent to deceive the U.S.P.T.O. and to facilitate issuance of the '958 patent, as well as other patents.

156. On information and belief, the '958 Applicants and their agents at Poms, Smith, Lande, and Rose, including Steven E. Shapiro and David G. Alexander, actions and inaction described herein constitute inequitable conduct. As a result of such conduct, each and every claim of the '958 patent are rendered unenforceable.

157. A judicial declaration of unenforceability of the '958 patent is necessary and appropriate in order to resolve this controversy.

SIXTEENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '277 Patent)

158. The allegations contained in paragraphs 1 through 157 are incorporated by reference as if fully set herein.

159. Defendants claim to be the owner and assignee of all rights, title, and interest in and under the '277 patent.

160. Defendants have accused Plaintiff of infringing the '277 patent through its manufacture, sale, use, and/or importation of certain software products, and have asserted that Plaintiff must take a license to the '277 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products.

161. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products without a license to the '277 patent.

162. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '277 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

163. Upon information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '277 patent, either literally or under the doctrine of equivalents.

164. A judicial declaration of non-infringement of the '277 patent is necessary and appropriate in order to resolve this controversy.

SEVENTEENTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '277 Patent)

165. The allegations contained in paragraphs 1 through 164 are incorporated by reference as if fully set herein.

166. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '277 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

167. Upon information and belief, the '277 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

168. A judicial declaration of invalidity of the '277 patent is necessary and appropriate in order to resolve this controversy.

EIGHTEENTH CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '277 Patent)

169. The allegations contained in paragraphs 1 through 168 are incorporated by reference as if fully set herein.

170. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '277 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

171. On information and belief, the '277 patent is unenforceable by reason of

inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholding of information from the U.S.P.T.O. described below.

172. The allegations contained in paragraphs 134 through 157 related to the unenforceability of the '958 patent due to inequitable conduct are incorporated by reference as if fully set herein.

173. On information and belief, the Lagnese reference was disclosed to the U.S.P.T.O. during the prosecution of the '277 patent. The Lis and McFarland references, however, were not disclosed on any of the co-pending or later-filed patent applications described in the preceding paragraphs; most specifically, the application that eventually issued as the '277 patent.

174. On information and belief, the Lis and McFarland references are material to the prosecution of the '277 patent. Both references are relevant to the patentability of the '277 patent under 35 U.S.C. §§ 102 and 103 as relevant prior art. The Lis and McFarland references describe prior art ECAD systems that include VSS and Mimola, among others. These systems alone, and in combination, describe all of the software tools recited in each of the independent claims 1, 12, 15, 19, 22, and 23 of the '277 patent. As such, the Lis and McFarland are highly material and not cumulative to the patentability of the '277 patent.

175. On information and belief, between the time the application for the '030 patent was filed and the '277 patent issued, Carlos Dangelo, the only common named inventor among the '030, '277, and '958 patents, and the other named co-inventors (collectively "the '277 Applicants") had numerous other applications co-pending that resulted in issued patents. The references disclosed from these patents include numerous references that were not disclosed during the prosecution of the '277 patent.

176. On information and belief, during prosecution of the '277 patent as well as the other applications in the same patent family, the '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose, including, David G. Alexander, were

under a duty to disclose to the U.S.P.T.O. the Lis and McFarland references once those references were brought to '277 Applicants' attention by the European search report.

177. On information and belief, the '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose, including, David G. Alexander, knew, or should have known, that the Lis and McFarland references were material to the patentability of the '277 patent as well as the other applications in the same patent family. The '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose demonstrated this duty during prosecution of the '308 patent.

178. On information and belief, during the pendency of the '277 patent, the '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose, including, David G. Alexander, had a duty to disclose information material to the patentability of the '277 patent and failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '277 patent.

179. On information and belief, the '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose, including, David G. Alexander, had a duty to disclose information material to the patentability of the '277 patent and failed to disclose the Lis, McFarland, and other references identified above during the prosecution of the '277 patent, as well as the other applications in the same patent family, with the intent to deceive the U.S.P.T.O. and to facilitate issuance of the '277 patent, as well as other patents.

180. Thus, on information and belief, the '277 Applicants, Gerald E. Linden, and the prosecuting attorneys at Poms, Smith, Lande, and Rose, including, David G. Alexander, had a duty to disclose information material to the patentability of the '277 patent and intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the

U.S.P.T.O. to improperly issue the '277 patent. Such conduct was inequitable, rendering each and every claim of the '277 patent unenforceable.

181. A judicial declaration of unenforceability of the '277 patent is necessary and appropriate in order to resolve this controversy.

NINETEENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '700 Patent)

182. The allegations contained in paragraphs 1 through 181 are incorporated by reference as if fully set herein.

183. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '700 patent.

184. Defendants have accused Plaintiff of infringing the '700 patent through its manufacture, sale, use, and/or importation of certain hardware products and/or integrated circuits, and have asserted that Plaintiff must take a license to the '700 patent to lawfully continue the manufacture, sale, use, and/or importation of the accused integrated circuits.

185. Plaintiff has informed Defendants that Plaintiff contends it has the right to engage in the manufacture, sale, use, and/or importation of these hardware products and/or integrated circuits without a license to the '700 patent.

186. Defendants have asserted that the '700 patent is within the scope of the PLA between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA.

187. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '700 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

188. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '700 patent, either literally or under the doctrine of equivalents.

189. A judicial declaration of non-infringement of the '700 patent is necessary and appropriate in order to resolve this controversy.

TWENTIETH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '700 Patent)

190. The allegations contained in paragraphs 1 through 189 are incorporated by reference as if fully set herein.

191. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '700 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

192. On information and belief, the '700 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

193. A judicial declaration of invalidity of the '700 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-FIRST CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '700 Patent)

194. The allegations contained in paragraphs 1 through 193 are incorporated by reference as if fully set herein.

195. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '700 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

196. On information and belief, the '700 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholdings of information from the U.S.P.T.O. described below.

197. On information and belief, during the prosecution of the '700 patent, the named inventor, Mr. Morris, had various issued patents ("Morris patents") or co-pending applications that were relevant to the claimed subject matter of the '700 patent. Despite their relevance, neither Mr. Morris, nor others with a duty of disclosure to the U.S.P.T.O., disclosed the other Morris patents and co-pending applications to the examiner of the '700 patent.

198. For example, on information and belief, Mr. Morris had a co-pending application (issued as U.S. Patent No. 6,396,315 ("the '315 patent"), included herewith as Exhibit 17) that was directly relevant to the claims of the '700 patent. Where claim 1 of the '700 patent generally relates to an integrated circuit having a buffer, core logic, and a blocking circuit that presents *a high impedance state at the output of the IC* when the core logic is not powered, the '315 patent addressed the same issues. (*Compare* the '700 patent, claim 1, *with* the '315 patent, Field of the Invention.) The '315 patent, for example, describes that it "relates to buffers . . . *presenting a high impedance* when the electronic device is in an inoperable state." (the '315 patent at 1:5-11.) However, no individual with a duty of disclosure to the U.S.P.T.O., including the prosecuting attorneys and the named inventor, disclosed the '315 patent to the examiner of the '700 patent.

199. On information and belief, Mr. Morris had other co-pending applications and issued patents that may also relate to the subject matter claimed in the '700 patent but that were also not disclosed during prosecution of the '700 patent, including:

U.S. Patent No. 6,087,853	Controlled output impedance buffer using CMOS technology
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U.S. Patent No. 6,064,231	CMOS input buffer protection circuit
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U.S. Patent No. 6,064,229	Voltage translating buffer based on low voltage technology
U.S. Patent No. 6,014,039	CMOS high voltage drive output buffer
U.S. Patent No. 5,973,530	Low power, high voltage-tolerant bus holder circuit in low voltage technology
U.S. Patent No. 5,952,848	High-voltage tolerant input buffer in low-voltage technology
U.S. Patent No. 5,933,027	High-voltage-tolerant output buffers in low-voltage technology
U.S. Patent No. 5,926,056	Voltage tolerant output buffer
U.S. Patent No. 5,808,480	High voltage swing output buffer in low voltage technology
U.S. Patent No. 5,502,328	Bipolar ESD protection for integrated circuits
U.S. Patent No. 5,381,062	Multi-voltage compatible bidirectional buffer
U.S. Patent No. 5,334,885	Automatic control of buffer speed
U.S. Patent No. 5,304,867	CMOS input buffer with high speed and low power
U.S. Patent No. 5,304,839	Bipolar ESD protection for integrated circuits
U.S. Patent No. 4,912,347	CMOS to ECL output buffer

200. Moreover, on information and belief, the prior art cited during the prosecution of the above-listed patents was also not disclosed during the prosecution of the '700 patent, including the following printed patents and publications:

U.S. Pat. Nos. 4,210,829, 4,437,024, 4,437,171, 4,471,242, 4,533,842, 4,612,461, 4,645,951, 4,656,372, 4,656,375, 4,672,243, 4,691,127, 4,701,642, 4,704,547, 4,717,869, 4,719,369, 4,739,193, 4,791,323, 4,806,801, 4,806,999, 4,814,853, 4,821,089, 4,823,029, 4,825,106, 4,959,563, 4,963,766, 4,968,902, 4,972,101, 4,975,598, 4,992,753, 4,994,874, 5,004,936, 5,017,807, 5,029,284, 5,036,226, 5,072,273, 5,095,231, 5,111,081, 5,117,131, 5,138,413, 5,144,167, 5,151,622, 5,254,883, 5,278,460, 5,300,832, 5,378,945, 5,382,847, 5,408,191, 5,414,314, 5,418,476, 5,432,462, 5,432,467, 5,440,249, 5,457,407, 5,483,176, 5,512,844, 5,534,795, 5,559,447, 5,559,464, 5,563,539, 5,606,268, 5,629,634, 5,635,861, 5,656,951, 5,670,898, 5,684,415, 5,723,992, 5,729,157, 5,731,714, 5,736,869, 5,748,010, 5,764,077, 5,828,231, 5,834,948, 5,864,243, 5,892,371, 5,892,377, 5,903,180, and 5,923,184.

European Pat. Nos. 0690587A1, 0184875, 0264470, and 125733; Japanese Pat. Nos. 4-78221, 4051712; UK Pat. No. 2176053; and German Pat. No. 3626394.

Roubik Gregorian & Gabor C. Temes, Analog MOS Integrated Circuits for Signal Processing, 1986, pp. 141-143, A Wiley-Interscience Publication, John Wiley & Sons.

Anonymous, Fast Level Converter Circuit, IBM Technical Disclosure Bulletin, May 1987, p. 5167, vol. 29 No. 12, New York.

Yusuke Ohtomo, et al., A Quarter-micron SIMOX-CMOS LVTTL-compatible Gate Array With an Over 2,000 V ESB-protection Circuit, Proceedings of the IEEE 1996 Custom Integrated Circuits Conference (CICC), San Diego, May 1996, pp. 57-60.

Takahashi et al., 3.3V-5V Compatible I/O Circuit without Thick Gate Oxide, IEEE 1992 Custom Integrated Circuits Conference, May 1992, pp. 23.3.1-23.3.4.

H. Partovi et al., 1991 Symposium on VLSI Circuits, Digest of Technical Papers, May 30, 1991, OISO pp. 51-52: Noise Suppression Techniques for Logic and Memory Circuits.

Yasuhiro Sugimot & Hiroyuki Hara, Extended Abstracts, Bi-CMOS Interface Circuit in Mixed CMOS/TTL and ECL Use Environment, vol. 87-1, Abstract No. 273, Toshiba Corporation, Semiconductor Division.

Edwin L. Hudson & Stephen L. Smith, Session XVIII: Static RAMs, Fam18.1: An ECL Compatible 4K CMOS RAM, Intel Corp., Santa Clara, California, ISSCC 82/ Friday, Feb. 12, 1982/Continental Ballrooms 5-9/9:00 a.m.

K. Ogiue, M. Odaka, S. Miyaoka, I. Masuda, T. Ikeda & K. Tonomura, 13-ns, 500-mW, 64-kbit ECL RAM Using Hi-BICMOS Technology, 1986, 0018-9200/86/10-00-0681 \$01.00, pp. 681 and 683, IEEE.

201. On information and belief, during the pendency of the '700 patent, the '700 Applicant and others with a duty to disclose information material to the patentability of the '700 patent failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these

co-pending applications that a reasonable examiner would consider to be material to the patentability of the '700 patent.

202. On information and belief, the Applicant, Mr. Morris, had a duty to disclose relevant co-pending and issued patents on which he was a named inventor and had a duty to disclose at least the relevant art identified above, which were presented to Mr. Morris during prosecution of his other co-pending patent applications and issued patents. Moreover, others with a duty to disclose, including the prosecuting attorneys, also failed to disclose relevant information and prior art. Because the undisclosed items were relevant, to withhold this information was a material breach of the duty owed to the U.S.P.T.O.

203. On information and belief, Mr. Morris and others with a duty to disclose information material to the patentability of the '700 patent intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the U.S.P.T.O. to improperly issue the '700 patent. Such conduct was inequitable rendering each and every claim of the '700 patent unenforceable.

204. A judicial declaration of unenforceability of the '700 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-SECOND CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '001 Patent)

205. The allegations contained in paragraphs 1 through 204 are incorporated by reference as if fully set herein.

206. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '001 patent.

207. Defendants have accused Plaintiff of infringing the '001 patent through its manufacture, sale, use, and/or importation of certain software products and/or integrated circuits, and have asserted that Plaintiff must take a license to the '001 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

208. Plaintiff has informed Defendants that Plaintiff contends that it has the right to

engage in the manufacture, sale, use, and/or importation of these software products and/or integrated circuits without a license to the '001 patent.

209. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '001 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

210. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '001 patent, either literally or under the doctrine of equivalents.

211. A judicial declaration of non-infringement of the '001 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-THIRD CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '001 Patent)

212. The allegations contained in paragraphs 1 through 211 are incorporated by reference as if fully set herein.

213. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '001 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

214. On information and belief, the '001 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

215. A judicial declaration of invalidity of the '001 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-FOURTH CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '001 Patent)

216. The allegations contained in paragraphs 1 through 215 are incorporated by

reference as if fully set herein.

217. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '001 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

218. On information and belief, the '001 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the following deliberate withholdings of information from the U.S.P.T.O.

219. On information and belief, during the prosecution of the '001 patent, the named inventor, Mr. Graef, had various issued patents ("Graef patents") and co-pending patent applications that were relevant to the claimed subject matter of the '001 patent. Despite their relevance, neither Mr. Graef, nor others with a duty of disclosure to the U.S.P.T.O., disclosed the Graef patents and relevant co-pending patent applications to the examiner of the '001 patent.

220. For example, on information and belief, Mr. Graef had a co-pending application (issued as U.S. Patent No. 6,457,160 ("the '160 patent")) that was directly relevant to the claims of the '001 patent. Where claim 1 of the '001 patent generally relates to *partitioning* an integrated circuit and generating a *clock budgeting* plan, the '160 patent addressed the same issues. (See the '001 patent, claim 1) The '160 patent describes that "*partitioning* of the entire circuit into blocks results in a two-level block hierarchy" (the '160 patent at 2:63-64) and issues related to "problems with *time budgeting* and block management." (the '160 patent at 8:53-54) But no one with a duty of disclosure to the U.S.P.T.O., including the prosecuting attorneys and the named inventor, disclosed the '160 patent to the examiner of the '001 patent. Moreover, where the examiner of the '160 patent found certain relevant items of prior art, including U.S. Patent No. 5,867,399, which was assigned to LSI and was purportedly invented by Michael D. Rostoker, a then-vice president of LSI as well as a then-registered patent attorney, and Daniel R.

Watkins, a then-LSI employee, such prior art was not disclosed to the examiner of the '001 patent. The '339 patent actually claims "**partitioning** said circuit design into a plurality of functional block representations" ('339 patent, claim 15) and "determining a high-level **timing criteria** for said circuit design" ('339 patent, claim 17 dependent from claim 15) in a similar way to the claims of the '001 patent. Accordingly, LSI, through Mr. Graef and the prosecuting attorneys, as well as through Messrs. Rostoker and Watkins, had information relevant to the patentability of the '001 patent that was not disclosed to the examiner of the '001 patent.

221. On information and belief, Mr. Graef had other co-pending applications and issued patents that related to partitioning and timing issues as claimed in the '001 patent but were not disclosed during its prosecution, including:

U.S. Patent No. 6,766,499	Buffer cell insertion and electronic design automation
U.S. Patent No. 6,687,661	Utilizing a technology-independent system description incorporating a metal layer dependent attribute
U.S. Patent No. 6,634,014	Delay/load estimation for use in integrated circuit design
U.S. Patent No. 6,598,213	Static timing analysis validation tool for ASIC cores
U.S. Patent No. 6,546,538	Integrated circuit having on-chip capacitors for supplying power to portions of the circuit requiring high-transient peak power
U.S. Patent No. 6,532,576	Cell interconnect delay library for integrated circuit design
U.S. Patent No. 6,502,230	Circuit modeling
U.S. Patent No. 6,457,160	Iterative prediction of circuit delays
U.S. Patent No. 6,189,131	Method of selecting and synthesizing metal interconnect wires in integrated circuits
U.S. Patent No. 6,184,711	Low impact signal buffering in integrated circuits
U.S. Patent No. 6,101,329	System for comparing counter blocks and flag registers to determine whether FIFO buffer can send or receive data

U.S. Patent No. 6,083,269	Digital integrated circuit design system and methodology with hardware
U.S. Patent No. 5,974,248	Intermediate test file conversion and comparison
U.S. Patent No. 5,898,705	Method for detecting bus shorts in semiconductor devices
U.S. Patent No. 5,831,993	Method and apparatus for scan chain with reduced delay penalty

222. Moreover, on information and belief, the prior art cited during the prosecution of the above-listed patents was also not disclosed during the prosecution of the '001 patent, including:

U.S. Patent Nos. 4,030,078, 4,085,438, 4,175,287, 4,378,620, 4,713,773, 4,859,870, 5,053,980, 5,084,841, 5,111,413, 5,207,103, 5,247,455, 5,249,271, 5,305,253, 5,306,867, 5,323,401, 5,341,049, 5,365,485, 5,371,851, 5,384,710, 5,384,744, 5,390,193, 5,396,435, 5,404,452, 5,446,742, 5,448,606, 5,452,227, 5,455,928, 5,475,611, 5,475,695, 5,487,018, 5,493,672, 5,500,804, 5,504,440, 5,513,188, 5,513,224, 5,517,506, 5,528,508, 5,530,372, 5,535,223, 5,539,336, 5,541,849, 5,544,071, 5,557,575, 5,559,997, 5,568,395, 5,581,475, 5,610,833, 5,623,418, 5,629,860, 5,640,404, 5,644,581, 5,666,290, 5,668,745, 5,671,150, 5,672,966, 5,691,662, 5,694,402, 5,706,294, 5,712,992, 5,729,467, 5,737,580, 5,757,208, 5,758,075, 5,761,080, 5,802,052, 5,808,330, 5,831,870, 5,883,814, 5,901,063, 5,933,356, 5,946,211, 5,949,638, 5,999,016, 6,066,177, 6,131,182, 6,145,117, 6,173,435, 6,184,711, 6,216,252, 6,218,729, 6,258,733, 6,286,126, 6,347,393, 6,363,516, 6,378,109, 6,446,239, 6,499,131, 6,507,935, 6,532,576, 6,536,022, and 6,546,541.

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Eurich et al., EDIF Grows Up, IEEE Spectrum, November 1990, pp. 68-72.

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Internet reference--[http://www.lsilogic.com/products/5.sub.- 4q.html](http://www.lsilogic.com/products/5.sub.-4q.html).ASIC CAD & Methodology From LSI Logic Corporation; FlexStream.TM. ASIC Deep Submicron Design Solution (14 pages).

Internet reference--<http://www.lsillogic.com/products/5.sub.-4r.htm>1. ASIC Products: FlexStream.TM. Design Solution; ASIC CAD & Methodology From LSI Logic Corporation; (6 pages).

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223. On information and belief, during the pendency of the '001 patent, the '001 Applicant and others with a duty to disclose information material to the patentability of the '001 patent failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '001 patent.

224. On information and belief, the '001 Applicant, Mr. Graef, had a duty to disclose relevant co-pending patent applications or issued patents on which he was a named inventor and had a duty to disclose at least the art identified above, which was presented to Mr. Graef during

prosecution of his other co-pending applications. Moreover, others with a duty to disclose, including the prosecuting attorneys, also failed to disclose relevant information and prior art. Because the undisclosed items were relevant, to withhold this information was a material breach of the duty owed to the U.S.P.T.O.

225. Thus, upon information and belief, Mr. Graef and others with a duty to disclose information material to the patentability of the '001 patent intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the U.S.P.T.O. to improperly issue the '001 patent. Such conduct was inequitable rendering each and every claim of the '001 patent unenforceable.

226. A judicial declaration of unenforceability of the '001 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-FIFTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '683 Patent)

227. The allegations contained in paragraphs 1 through 226 are incorporated by reference as if fully set herein.

228. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '683 patent.

229. Defendants have accused Plaintiff of infringing the '683 patent through its manufacture, sale, use, and/or importation of certain software products and/or integrated circuits, and have asserted that Plaintiff must take a license to the '683 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

230. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products and/or integrated circuits without a license to the '683 patent.

231. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-

infringement of the '683 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

232. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '683 patent, either literally or under the doctrine of equivalents.

233. A judicial declaration of non-infringement of the '683 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-SIXTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '683 Patent)

234. The allegations contained in paragraphs 1 through 233 are incorporated by reference as if fully set herein.

235. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '683 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

236. On information and belief, the '683 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

237. A judicial declaration of invalidity of the '683 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-SEVENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '677 Patent)

238. The allegations contained in paragraphs 1 through 237 are incorporated by reference as if fully set herein.

239. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '677 patent.

240. Defendants have accused Plaintiff of infringing the '677 patent through its

manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the '677 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

241. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '677 patent.

242. Defendants have asserted that the '677 patent is within the scope of the PLA between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA.

243. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '677 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

244. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '677 patent, either literally or under the doctrine of equivalents.

245. A judicial declaration of non-infringement of the '677 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-EIGHTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '677 Patent)

246. The allegations contained in paragraphs 1 through 245 are incorporated by reference as if fully set herein.

247. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '677 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

248. On information and belief, the '677 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

249. A judicial declaration of invalidity of the '677 patent is necessary and appropriate in order to resolve this controversy.

TWENTY-NINTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '361 Patent)

250. The allegations contained in paragraphs 1 through 249 are incorporated by reference as if fully set herein.

251. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '361 patent.

252. Defendants have accused Plaintiff of infringing the '361 patent through its manufacture, sale, use, and/or importation of certain software products, and have asserted that Plaintiff must take a license to the '361 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products.

253. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products without a license to the '361 patent.

254. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '361 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

255. Upon information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '361 patent, either literally or under the doctrine of equivalents.

256. A judicial declaration of non-infringement of the '361 patent is necessary and appropriate in order to resolve this controversy.

THIRTIETH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '361 Patent)

257. The allegations contained in paragraphs 1 through 256 are incorporated by reference as if fully set herein.

258. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '361 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

259. Upon information and belief, the '361 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

260. A judicial declaration of invalidity of the '361 patent is necessary and appropriate in order to resolve this controversy.

THIRTY-FIRST CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '361 Patent)

261. The allegations contained in paragraphs 1 through 260 are incorporated by reference as if fully set herein.

262. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '361 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

263. On information and belief, the '361 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholdings of information from the U.S.P.T.O. described below.

264. During the prosecution of the '361 patent, the named co-inventors of the '361 patent had 20 co-pending patent applications that resulted in issued patents, including four applications that were filed the same day, October 2, 2000, as the '361 patent's application, and contained substantially the same specification. The patents that issued from these applications are:

U.S. Patent No. 6,681,373	Method and apparatus for dynamic buffer and inverter tree optimization
U.S. Patent No. 6,637,011	Method and apparatus for quick search for identities applicable to specified formula
U.S. Patent No. 6,543,032	Method and apparatus for local re-synthesis of logic trees with multiple cost functions
U.S. Patent No. 6,532,582	Method and apparatus for optimal critical netlist area selection

265. During the prosecution of the '361 patent, no relevant art was supplied to the U.S.P.T.O. by the named inventors of the claimed '361 invention or their representatives. More specifically, the four co-pending applications with essentially the same specification were never disclosed to the U.S.P.T.O.

266. On information and belief, the four co-pending applications with essentially the same specification, as well as any references disclosed during the prosecution of those applications, are material and to the patentability of the '361 patent. Independent claims 1 and 3 of the '361 patent use step-plus-function and means-plus-function language respectively, and are subject to interpretation under 35 U.S.C. § 112 ¶ 6. Both of these claims recite the use of "methods of local optimization" generically, but because of their interpretation under 35 U.S.C. § 112 ¶ 6, they must refer to the specific methods and structures disclosed in the specification. On information and belief, the various claims in the four co-pending applications claim the specific methods and structures for the "methods of local optimization," using step-plus function and means-plus-function language that are described in the '361 patent's specification.

Therefore, any prior art and other references found to be material and not cumulative in the prosecution of the co-pending patents would also be found to be relevant, material, and not cumulative to the examiner of the '361 patent.

267. Under 37 C.F.R. § 1.56, each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the U.S.P.T.O., which includes the duty to disclose to the U.S.P.T.O. all information known to that individual to be material to patentability of any pending claim.

268. On information and belief, the named '361 inventors and their agents at Mitchell Silberberg & Knupp, including Steven E. Shapiro, knew, or should have known, that the four co-pending applications with essentially the same specification, as well as any references disclosed during the prosecution of those applications, were material to the patentability of the '361 patent.

269. The named '361 inventors and their agents at Mitchell Silberberg & Knupp, including Steven E. Shapiro, failed to disclose the four co-pending applications with essentially the same specification, as well as any references disclosed during the prosecution of those applications, during the prosecution of the '361 patent's application.

270. On information and belief, during the pendency of the '361 patent, the '361 Applicants and their agents at Mitchell Silberberg & Knupp, including Steven E. Shapiro, had a duty to disclose information material to the patentability of the '361 patent and failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '361 patent.

271. On information and belief, the named '361 inventors and their agents at Mitchell Silberberg & Knupp, including Steven E. Shapiro, had a duty to disclose information material to the patentability of the '361 patent, failed to disclose the four co-pending applications with

essentially the same specification, as well as any references disclosed during the prosecution of those applications, with the intent to deceive the U.S.P.T.O. and to facilitate issuance of the '361 patent

272. On information and belief, the named '361 inventors and their agents at Mitchell Silberberg & Knupp, including Steven E. Shapiro, actions and inaction described herein constitute inequitable conduct. As a result of such conduct, each and every claim of the '361 patent are rendered unenforceable.

273. A judicial declaration of unenforceability of the '361 patent is necessary and appropriate in order to resolve this controversy.

THIRTY-SECOND CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '333 Patent)

274. The allegations contained in paragraphs 1 through 273 are incorporated by reference as if fully set herein.

275. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '333 patent.

276. Defendants have accused Plaintiff of infringing the '333 patent through its manufacture, sale, use, and/or importation of certain software products and/or integrated circuits, and have asserted that Plaintiff must take a license to the '333 patent to lawfully continue the manufacture, sale, use, and/or importation of these software products and/or integrated circuits.

277. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these software products and/or integrated circuits without a license to the '333 patent.

278. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '333 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

279. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '333 patent, either literally or under the doctrine of equivalents.

280. A judicial declaration of non-infringement of the '333 patent is necessary and appropriate in order to resolve this controversy.

THIRTY-THIRD CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '333 Patent)

281. The allegations contained in paragraphs 1 through 280 are incorporated by reference as if fully set herein.

282. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '333 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

283. On information and belief, the '333 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

284. A judicial declaration of invalidity of the '333 patent is necessary and appropriate in order to resolve this controversy.

THIRTY-FOURTH CAUSE OF ACTION

(Declaratory Judgment of Unenforceability of the '333 Patent)

285. The allegations contained in paragraphs 1 through 284 are incorporated by reference as if fully set herein.

286. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the unenforceability of the '333 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

287. On information and belief, the '333 patent is unenforceable by reason of inequitable conduct committed during the prosecution of the patent before the U.S.P.T.O. While the full scope of such inequitable conduct is not now known in its entirety and with precision, such conduct includes at least the deliberate withholdings of information from the U.S.P.T.O. described below.

288. On information and belief, during the prosecution of the '333 patent, the named inventor, Mr. Hamlin, had various issued patents ("Hamlin patents") and co-pending patent applications that were relevant to the claimed subject matter of the '333 patent. Despite their relevance, neither Mr. Hamlin, nor others with a duty of disclosure to the U.S.P.T.O., disclosed the Hamlin patents and relevant co-pending patent applications.

289. On information and belief, during the pendency of the application that issued as the '333 patent, Mr. Hamlin had various co-pending applications that disclosed or were relevant to the subject matter of the claims of the '333 patent. For example, where claim 1 of the 333 patent claims:

A system for providing distributed dynamic functionality in an electronic environment comprising:
 a plurality of *platforms*, the platforms suitable for providing a logic function, the platforms including embedded *programmable logic, memory* and a reconfigurable *core*, the logic, memory and reconfigurable core communicatively coupled via a *fabric interconnect*; and
 a map expressing logic functions of the plurality of platforms;
 wherein the reconfigurable core is configured as a base processor design plus instruction set extensions designed to carry out function-specific logical and arithmetic operations.

The specification of the '333 patent discloses this functionality as follows:

The *platforms* are suitable for providing a *logic function*, and include embedded *programmable logic, memory and a reconfigurable core*. The logic, memory and reconfigurable core are communicatively coupled via a *fabric interconnect*. A map is also included which expresses logic functions of the plurality of platforms. ('333 patent at 1:6-2:5)

290. On information and belief, this functionality is similarly described in several of Mr. Hamlin's other co-pending applications that were not disclosed during the prosecution of the

'333 patent. For example, Mr. Hamlin's co-pending application that issued as U.S. Patent No. 6,779,168 was directly relevant to the claims of the '333 patent with its disclosure of the following:

The *platforms* include embedded *programmable logic and MRAM memory, the logic and MRAM memory communicatively coupled via an interconnect*. (U.S. Patent No. 6,779,168 at 2:7-9)

Similarly, U.S. Patent 6,889,366 discloses:

Methodology and met methodology and the relationship to platform architecture, and the form that this has taken mostly has been in advanced *platform* architecture, such as *reconfigurable processors, embedded programmable logic cores*, relationship between these two things that includes the incorporation of nonvolatile writable memory, embedded software techniques, a *scalable interconnect*, such as an interconnect with isochronous properties, and the like. (U.S. Patent No. 6,889,366 at 2:63-3:4)

U.S. Patent 7,051,297 discloses:

A *platform* is a large-scale, high-complexity semiconductor device that includes one or more of the following elements: (1) *memory*; (2) *a customizable array of transistors*; (3) *a IP (intellectual property) block*; (4) *a processor, e.g., an ESP (embedded standard product)*; (5) *an embedded programmable logic block*; and (6) *interconnect*. (U.S. Patent No. 7,051,297 at 3:12-18)

And U.S. Patent 6,769,097 discloses:

One such organization has been termed a 'sea-of-*platforms*', referring to the idea that multiple 'platforms' (which may includes *processors, programmable logic, gate array blocks, standard cell IP blocks, memory blocks, and the like*) may usefully be organized in interconnection patterns described by switching fabric heuristics and algorithms. (U.S. Patent No. 6,769,097 at 2:62-67)

Mr. Hamlin's other co-pending or issued patents, which may be relevant to the claims of the '333 patent, include:

- | | |
|---------------------------|--|
| U.S. Patent No. 7,322,021 | Virtual path for interconnect fabric using bandwidth process |
| U.S. Patent No. 7,127,692 | Timing abstraction and partitioning strategy |
| U.S. Patent No. 7,051,297 | Method and apparatus for mapping platform-based design to multiple foundry processes |

U.S. Patent No. 7,016,748	Collaborative integration of hybrid electronic and micro and sub-micro level aggregates
U.S. Patent No. 6,999,910	Method and apparatus for implementing a metamethodology
U.S. Patent No. 6,889,366	System and method for coevolutionary circuit design
U.S. Patent No. 6,857,108	Interactive representation of structural dependencies in semiconductor design flows
U.S. Patent No. 6,795,849	Paradigm for inter-networked storage
U.S. Patent No. 6,792,584	System and method for designing an integrated circuit
U.S. Patent No. 6,779,168	Magnetoresistive memory for a complex programmable logic device
U.S. Patent No. 6,769,097	Scale-invariant topology and traffic allocation in multi-node system-on-chip switching fabrics
U.S. Patent No. 6,751,783	System and method for optimizing an integrated circuit design
U.S. Patent No. 6,654,946	Interscalable interconnect

291. Moreover, the prior art cited during the prosecution of the above-listed patents was also not disclosed during the prosecution of the '333 patent, including:

U.S. Patent Nos. 4,100,403, 4,656,592, 4,656,592, 4,656,592, 4,656,592, 5,220,512, 5,222,030, 5,224,055, 5,303,161, 5,452,231, 5,500,805, 5,519,630, 5,544,067, 5,553,002, 5,557,533, 5,563,801, 5,596,742, 5,615,124, 5,625,565, 5,673,367, 5,737,234, 5,742,738, 5,752,070, 5,752,070, 5,752,070, 5,752,070, 5,752,070, 5,752,070, 5,754,826, 5,761,484, 5,818,728, 5,818,728, 5,818,728, 5,818,729, 5,818,729, 5,818,729, 5,892,678, 5,898,677, 5,898,677, 5,898,677, 5,898,677, 5,898,677, 5,907,698, 6,026,226, 6,058,385, 6,102,961, 6,134,516, 6,145,117, 6,152,613, 6,152,613, 6,152,613, 6,152,613, 6,152,613, 6,152,613, 6,205,362, 6,216,259, 6,219,819, 6,230,290, 6,253,358, 6,269,277, 6,269,277, 6,269,277, 6,269,277, 6,269,277, 6,269,467, 6,269,467, 6,360,191, 6,360,356, 6,366,874, 6,408,428, 6,421,251, 6,425,116, 6,459,136, 6,459,136, 6,459,136, 6,470,482, 6,470,482, 6,505,329, 6,523,151, 6,526,556, 6,539,531, 6,539,531, 6,546,536, 6,557,145, 6,560,739, 6,569,382, 6,574,778, 6,574,783, 6,578,176, 6,594,800, 6,605,962, 6,625,788, 6,634,008, 6,640,333, 6,643,195, 6,654,946, 6,658,478, 6,678,875, 6,697,914, 6,704,917, 6,717,576, 6,721,922, 6,742,165, 6,742,165, 6,757,882, 6,834,380, 6,871,154, and 6,966,044.

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292. On information and belief, the Applicant, Mr. Hamlin, had a duty to disclose relevant co-pending or issued patents on which he was a named inventor and had a duty to disclose at least the art identified above, which was presented to Mr. Hamlin during prosecution of his other co-pending applications. Moreover, others with a duty to disclose, including the

prosecuting attorneys, also failed to disclose relevant information and prior art. Because the undisclosed items were relevant, to withhold this information was a material breach of the duty owed to the U.S.P.T.O.

293. On information and belief, during the pendency of the '333 patent, the '333 Applicant and others with a duty to disclose information material to the patentability of the '333 patent failed to disclose material information regarding the status and prosecution of co-pending applications in related patents identified above. These omissions included, but are not limited to, the non-disclosure of office actions, rejections, responses and arguments to office actions and rejections, allowances and the reasons for allowance, and art, not necessarily prior art, from these co-pending applications that a reasonable examiner would consider to be material to the patentability of the '333 patent.

294. Thus, on information and belief, Mr. Hamlin and others with a duty to disclose information material to the patentability of the '333 patent intentionally and specifically intended to deceive the U.S.P.T.O. as to the true state of the art so as to induce the U.S.P.T.O. to improperly issue the '333 patent. Such conduct was inequitable rendering each and every claim of the '333 patent unenforceable.

295. A judicial declaration of unenforceability of the '333 patent is necessary and appropriate in order to resolve this controversy.

THIRTY-FIFTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '968 Patent)

296. The allegations contained in paragraphs 1 through 295 are incorporated by reference as if fully set herein.

297. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '968 patent.

298. Defendants have accused Plaintiff of infringing the '968 patent through its manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that

Plaintiff must take a license to the '968 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

299. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '968 patent.

300. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '968 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

301. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '968 patent, either literally or under the doctrine of equivalents.

302. A judicial declaration of non-infringement is necessary and appropriate in order to resolve this controversy.

THIRTY-SIXTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '968 Patent)

303. The allegations contained in paragraphs 1 through 302 are incorporated by reference as if fully set herein.

304. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '968 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

305. On information and belief, the '968 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

306. A judicial declaration of invalidity is necessary and appropriate in order to resolve this controversy.

THIRTY-SEVENTH CAUSE OF ACTION

(Declaratory Judgment of Non-Infringement of the '726 Patent)

307. The allegations contained in paragraphs 1 through 306 are incorporated by reference as if fully set herein.

308. Defendants claim to be the owners and assignees of all rights, title, and interest in and under the '726 patent.

309. Defendants have accused Plaintiff of infringing the '726 patent through its manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the '726 patent to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

310. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '726 patent.

311. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the non-infringement of the '726 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

312. On information and belief, Plaintiff has not directly or indirectly infringed any valid and enforceable claims of the '726 patent, either literally or under the doctrine of equivalents.

313. A judicial declaration of non-infringement is necessary and appropriate in order to resolve this controversy.

THIRTY-EIGHTH CAUSE OF ACTION

(Declaratory Judgment of Invalidity of the '726 Patent)

314. The allegations contained in paragraphs 1 through 313 are incorporated by reference as if fully set herein.

315. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the invalidity of the '726 patent. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

316. On information and belief, the '726 patent is invalid because of its failure to comply with one or more of the requirements of the patent laws of the United States, including, without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

317. A judicial declaration of invalidity is necessary and appropriate in order to resolve this controversy.

THIRTY-NINTH CAUSE OF ACTION

(Declaratory Judgment that under the March 1, 1992 Patent Licencing Agreement Between AT&T and Xilinx (As Amended) No Royalties Are Owed by Xilinx)

318. The allegations contained in paragraphs 1 through 317 are incorporated by reference as if fully set herein.

319. Defendants claim to be the owners and assignees of all rights, title, and interest in and under each of the '765, '229, '431, '700, and '677 patents.

320. Defendants have accused Plaintiff of infringing each of the '765, '229, '431, '700, and '677 patents through its manufacture, sale, use, and/or importation of certain integrated circuits, and have asserted that Plaintiff must take a license to the '765, '229, '431, '700, and '677 patents to lawfully continue the manufacture, sale, use, and/or importation of these integrated circuits.

321. Defendants have asserted that the '765, '229, '431, '700, and '677 patents are within the scope of the Patent license Agreement ("PLA") between Xilinx and AT&T. Defendants have further asserted that they have certain rights under the PLA including the right to collect royalties from Xilinx. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA resulting from Xilinx allegedly not paying royalties relating to patents within the scope of the PLA.

322. Plaintiff has informed Defendants that Plaintiff contends that it has the right to engage in the manufacture, sale, use, and/or importation of these integrated circuits without a license to the '765, '229, '431, '700, and '677 patents because Plaintiff does not infringe these patents or these patents are invalid or unenforceable. Plaintiff has further informed Defendants that no royalties are due under the PLA because these patents are not infringed, are invalid, or are not enforceable.

323. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to the lack of royalties due under the PLA. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

324. On information and belief, Plaintiff does not owe any royalties under the PLA for directly or indirectly infringing any valid and enforceable claims of the '765, '229, '431, '700, and '677 patents, either literally or under the doctrine of equivalents.

325. A judicial declaration that no royalties are due is necessary and appropriate in order to resolve this controversy.

FORTIETH CAUSE OF ACTION

(Declaratory Judgment That the March 1, 1992, Patent license Agreement Between AT&T and Xilinx (As Amended) Cannot Be Enforced By Defendants)

326. The allegations contained in paragraphs 1 through 325 are incorporated by reference as if fully set herein.

327. On or about March 12, 1992, Plaintiff and AT&T entered into a Patent License Agreement effective March 1, 1992.

328. Section 4.02 of PLA states that "neither this agreement nor any licenses or rights hereunder shall be otherwise assignable or transferable (in insolvency proceedings, by reason of the sale or transfer of assets, or by a corporate merger, or otherwise) by either party without the express written consent of the other party."

329. On or about January 31, 1996, Plaintiff and AT&T entered into a Letter Agreement addressing the PLA (“the Letter Agreement”). In this Letter Agreement, Plaintiff granted AT&T the one time right to assign its rights under the PLA to a restructured equipment company, Systems and Technology Company, later known as Lucent Technologies Inc. (“Lucent”).

330. Plaintiff has not granted Lucent the right to assign or otherwise transfer the PLA or any rights under the PLA to any other entity.

331. On information and belief, on or about February 1, 2001, Lucent assigned some license agreements and rights to collect royalties on agreement to Agere. However, Lucent assigned the agreements and rights “to the extent Lucent ha[d] the right to do so and only to that extent.”

332. Because Lucent did not have the right to transfer the PLA nor to transfer any rights under the PLA to Agere without Plaintiff’s express written consent and because Lucent explicitly only transferred rights relating to license agreements to Agere to the extent Lucent had the right to do so, Lucent did not transfer the PLA or any rights under the PLA to Agere on February 1, 2001.

333. On information and belief, Defendant Agere merged with Atlas Acquisition Corp., a wholly owned subsidiary of Defendant LSI, on or about December 3, 2006. Defendant Agere continued as the surviving corporation of the merger and as a wholly owned subsidiary of Defendant LSI.

334. Section 4.02 of PLA states that “[t]he grant of each license hereunder includes the right to grant sublicenses within the scope of such license to a party’s RELATED COMPANIES for so long as they remain its RELATED COMPANIES,” and defines “RELATED COMPANIES of a company as SUBSIDIARIES of the company and any other company so designated by mutual agreement in writing. . . .” Because LSI has not been and is not a subsidiary of Agere, the PLA would not have allowed any rights to transfer from Agere to LSI, even if Agere had had any rights under the PLA, which it did not.

335. In fact, Plaintiff has not granted any entity the right to assign or otherwise transfer the PLA or any rights under the PLA to LSI.

336. LSI has informed Plaintiff that it contends that it has been assigned rights to royalties from Plaintiff under the PLA.

337. Plaintiff has informed Defendants that Plaintiff contends that Defendants do not have the right to collect royalties from Plaintiff under the PLA.

338. Defendant Agere has filed an action in the Supreme Court of the State of New York, County of New York, for alleged breach of the PLA by Xilinx.

339. Under all the circumstances in this dispute, Defendants have, at a minimum, created a substantial, immediate, and real controversy among the parties as to whether or not Defendants have any rights under the PLA. A valid and justiciable controversy has arisen and exists among Plaintiff and Defendants within the meaning of 28 U.S.C. § 2201.

340. A judicial declaration that Defendants have no rights under the PLA and that Defendants do not have standing to enforce the PLA is necessary and appropriate in order to resolve this controversy.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff requests that the Court enter judgment in its favor and against Defendants, and requests the following relief:

- (A) An adjudication that the '765, '030, '229, '431, '277, '900, '958, '700, '001, '683, '677, '361, '333, '968, and '726 patents (collectively, the "Asserted Patents") are not infringed by Plaintiff's importation, use, offer for sale, and/or sale in the United States of any of its products;
- (B) An adjudication that the Asserted Patents are invalid;
- (C) An adjudication that the '765, '229, '277, '958, '700, '001, '361, and '333 patents are unenforceable;
- (D) An adjudication that Defendants do not have the right to collect any

royalties from Plaintiff under the PLA;

- (E) An adjudication that no royalties are owed by Xilinx under the PLA
- (F) An adjudication in favor of Plaintiff on each of Plaintiff's claims;
- (G) An adjudication that this is an exceptional case, and an award of Plaintiff's costs and attorneys' fees by Defendants pursuant to 35 U.S.C. § 285 or otherwise; and
- (H) Such other relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b) and Delaware Local Rule 38.1, Plaintiff respectfully requests a jury trial on all issues triable thereby.

POTTER ANDERSON & CORROON LLP

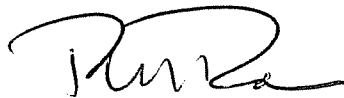
OF COUNSEL:

Kenneth R. Adamo
Jones Day
2727 N. Harwood Street
Dallas, TX 75201
(214) 220-3939

Behrooz Shariati
Jones Day
1755 Embarcadero Road
Palo Alto, CA 94303
(650) 739-3939

Dated: November 20, 2009
943455

By: _____



Philip A. Rovner (#3215)
Hercules Plaza
P.O. Box 951
Wilmington, DE 19899
(302) 984-6000
provner@potteranderson.com

*Attorneys for Plaintiff
Xilinx, Inc.*